STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT
Stream Protection and Management Branch

FIELD INVESTIGATION REPORT
FI2008102702 (East Maui, Honopou IIFS Site B)

Date of Field Investigation: October 27, 2008	**Time** (24-hour)**:** 0930 - 1130

CWRM Staff:	Ed Sakoda, Dean Uyeno, and Chui Ling Cheng
Individuals Present:	Garret Hew (EMI Water Resources Manager), Carl Freedman (Consultant at Haiku Design & Analysis) Honopou community – Lynn Scott, Beatrice Kekahuna, Sanford Kekahuna, Boni Kekahuna, and Wanda Vierra
Hydrologic Unit:	Honopou (6034)
Stream Name:	Honopou Stream

Findings:

At approximately 0930 hours, CWRM staff, Garret Hew, Carl Freedman, and members of the Honopou community arrived at the property of Melissa Souza. At the community meeting on October 23, Carl Freedman had asked to join CWRM staff for this field visit. From Melissa Souza's property, everyone hiked to IIFS Site B on Honopou Stream. CWRM staff prepared the site for flow measurement. Staff checked the upstream gage pool for debris and there was none. The entire flow measurement was completed in 30 minutes. Gage height readings were taken at the downstream gage pool at the start and finish of flow measurement. In addition to flow measurement, CWRM staff also recorded wind velocity, air temperature, water temperature and weather conditions. The weather was sunny with cool air temperatures and no rain. As computed back in the Honolulu Office, the flow at IIFS Site A was 0.140 cubic feet per second (0.090 million gallons per day), with no change in gage height.

Staff crew left Honopou Stream IIFS Site B at approximately 1130 hours, and drove to Haiku Ditch on Honopou Stream to document the building of the berm wall on the ditch. Refer to Field Investigation Report FI2008102703 (East Maui, Honopou Haiku Ditch) for more information.

Image Listing: (Attach PDF of image contact sheet)

File Name:	Brief Description:
20081027004	Ed Sakoda conducting flow measurement on Honopou Stream.
20081027005	Staff crew conducting flow measurement on Honopou Stream.
20081027007	Chui Ling Cheng recording flow measurement on Honopou Stream.
20081027009	Gage pool and concrete wall on Honopou Stream.
20081027010	Gage pool and concrete wall on Honopou Stream.
20081027011	IIFS Site B on Honopou Stream.

GPS Listing:

Shapefiles: (List file names of all shapefiles created and a brief description of each)

File Name:	Brief Description:
East_Maui_POI.shp	Points of interest (POI) recorded with the GPS unit during the field visit. The file includes POI recorded from all the East Maui field investigations.

Waypoints: (List all waypoints in decimal degrees and provide a brief description of each)

WP No.	Latitude	Longitude	Brief Description:
12	20.931867	-156.244694	IIFS Site B Flow Measurement on Honopou Stream
11	20.931827	-156.244678	IIFS Site B Reference Point on Honopou Stream

Attachments:
Brief Description:
1. Image Contact Sheet
2. Discharge Measurement and Gage Inspection Notes

Recommendations:

IMAGE CONTACT SHEET
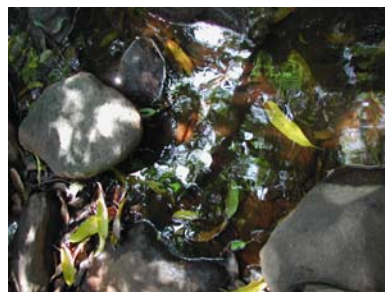

20081027004.JPG

20081027005.JPG

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20081027009.JPG

20081027010.JPG

20081027011.JPG

Form 9-275F
(Apr. 2001)

U.S. DEPARTMENT OF THE INTERIOR
U.S. Geological Survey
WATER RESOURCES DIVISION

DISCHARGE MEASUREMENT AND
GAGE INSPECTION NOTES

Meas. No. _____

Comp. by _Chui_

Checked by _DDU_

Sta. No. __HONOPOU LIFS SITE B__

Sta. Name _____

Date __10/27__ , 20 _08_ Party __Chui , Ed, Dean__

Width __1.3__ Area __0.471__ Vel. __0.30__ G.H. __0.83__ Disch. __0.14__

Method __Wading__ No. secs. __40__ G.H. change __0__ in _____ hrs.

Method coef._____ Horiz. angle coef. _____ Susp._____ Tags checked_____

Meter Type _____ Meter No. _____ Meter _____ ft. above bottom of wt.

Rating used _____ Spin test before meas. _____ ; after _____

Meas. plots _____ % diff. from rating no. _____ Indicated shift _____

GAGE READINGS						
Time					Inside	Outside
	Start	LEW @ 10:38				
		GHT = 1.00 + 0.17 = 0.83				
	Finish	REW @ 11:14				
		GHT = 1.00 + 0.17 = 0.83				
Weighted MGH						
GH correction						
Correct MGH						

Samples collected: water quality, sediment, biological, other _____

Measurements documented on separate sheets: water quality, aux./base gage, other _____

Rain gage serviced/calibrated ____

Weather: __Sunny, cool__

Air Temp. __25__ °C at __10:57__

Water Temp. __23__ °C at __10:57__

Check bar/chain found _____

Changed to _____ at _____

Correct _____

Wading, cable, ice, boat, upstr., downstr., side bridge, __15__ (ft), mi. upstr., downstr. of gage. _ref. point_

Measurement rated excellent (2%), good (5%), fair (8%), poor (> 8%); based on following conditions: Flow: __fairly uniform , laminar_____

Cross section: __fairly uniform, cobbles, leaves_____

Gage operating:_____ Record Removed _____

Battery voltage: _____ Intake/Orifice cleaned/purged:_____

Bubble-gage pressure, psi: Tank _____ , Line _____ ; Bubble-rate _____ /min.

Extreme-GH indicators: max _____ , min _____ .

CSG checked:_____ HWM height on stick _____ Ref. elev. _____ HWM elev. _____

HWM inside/outside: _____

Control: __Concrete_____

Remarks: _____

GH of zero flow = GH _____ - depth at control _____ = _____ ft., rated _____

Sheet No. _____ of _____ sheets

.0   .10   .20   .30   .40   .50   .60   .70   .75

River at -

ANGLE COEF-FICIENT	DIST. FROM INITIAL POINT	WIDTH	DEPTH	OBSERVA-TION DEPTH	REVO-LUTIONS	TIME IN SEC-ONDS	VELOCITY		ADJUST-ED FOR HOR. ANGLE OR	AREA	DISCHARGE
							AT POINT	MEAN IN VER-TICAL			
	LEW	@ 10	:38				GHT	= 1.00 -	0.17 =	0.83	
	4.5	.05	0								
	4.6	0.1	0.44			40		0.32		0.044	0.014 / 0.015
	4.7	0.1	0.44			40		0.28		.044	.012
	4.8	0.1	0.44			40		0.32		.044	.015
	4.9	0.1	0.52			40		0.33		.052	.017
	5.0	0.1	0.53			40		0.33		.053	.017
	5.1	0.1	0.54			40		0.29		.054	.016
	5.2	0.1	0.54			40		0.26		.054	.014
	5.3	0.1	0.58			40		0.29		.058	.017
	5.4	0.1	0.58			40		0.29		.058	.017
	5.5	.05	0.14			40		0			
	5.5	.2	0.19			40		0.15 / 0.145		.010	.001
	5.8	.15	0					0			0.139
⊙	1.3	1.3						.30		.471	0.14
	REW	@	11:14				GHT = 1.00 - 0.17 = 0.83				